

CLAIMS

Sub 1. A method for associating an active region with a corresponding position within an image included in a page displayed by a browser running on a client computer, the method comprising:

sending a request by the browser to a server for a description of a page that includes a specification of the image and an associated client-side image map, the client-side image map specifying a shape, size, and location of the active region within the image and specifying actions to be performed in response to input events directed to the active region;

receiving from the server in response to the request a description of the requested page that includes an invocation of a viewer for displaying the image, the invocation including parameters that describe the image and the client-side image map;

instantiating the viewer and passing to the viewer the parameters included in the invocation;

storing by the viewer representations of active regions within the image in image-relative coordinates along with indications of the actions to be performed in response to input events directed to the active region; and

when an input event is detected by the browser during display of the page,

passing the input event by the browser to the viewer, and

when the viewer determines that the input event was input to a position within the image corresponding to the active region, determining an action specified for performance in response to the input event to the active region and calling for performance of the determined action.

2. The method of claim 1 wherein the page displayed by the browser running on a client computer is a web page.

3. The method of claim 2 wherein the server runs on a server computer and a description of the web page is requested by the browser from the server and received by the browser from the server via the Internet.

4. The method of claim 2 wherein the server runs on the client computer and a description of the web page is requested by the browser from the server and received by the browser from the server via an inter-process communications medium within the client computer.

5. The method of claim 2 wherein the description of the web page received from the server in response to the request by the browser is a hyper-text markup language document.

6. The method of claim 2 wherein the image is an OpenPix image and wherein an invocation to a browser extension image viewer is included in the description of the web page.

7. The method of claim 2 wherein input events directed to the active region may include mouse-click, mouse-into, and mouse-out-from events, and actions to be performed in response to input events include display of a web page, display of an image, or launching of a software routine.

8. The method of claim 2 where image-relative coordinates represent the position of points within the image, a point within the image represented by a pair of coordinates, a first coordinate of the pair having a fractional value representing the ratio of a horizontal line segment with a first endpoint coincident with a vertical edge of the image and a second endpoint coincident with the point, the horizontal line segment perpendicular to the vertical edge of the image, the second coordinate of the pair having a fractional value representing the ratio of a vertical line segment with a first endpoint coincident with a horizontal edge of the image and a second endpoint coincident with the point, the vertical line segment perpendicular to the horizontal edge of the image, the horizontal and vertical edges of the image intersecting at an origin having coordinates (0, 0).

Sub 9. The method of claim 2 further including:

when a display altering input event is detected by the browser,

passing a display altering input command by the browser to the viewer, and altering the display of the image by the viewer in accordance with the input command.

10. The method of claim 9 wherein display altering input events include a zoom input event and a pan input event.

11. A method for serving a description of a page from a server to a browser running on a client computer that requests the page, the description of the page provided to the browser by the server containing an invocation of a viewer, the invocation including parameters that specify an image included in the page and an active region within the image, the method comprising:

receiving a request from the browser by the server for a description of the page that includes a specification of the image and an associated client-side image map, the client-side image map specifying a shape, size, and location of the active region within the image and that specifies actions to be performed in response to input events directed to the active region;

retrieving a description of the page;

determining the capabilities for viewing pages provided by the browser running on the client computer; and

when the browser running on the client computer is capable of accepting display altering commands from a user while displaying a page,

parsing the description of the page to find the specification of the image and the client-side image map included in the page,

substituting, in the description of the page, an invocation of a viewer for the specification of the image and the client-side image map included in the page, including in the invocation parameters that specify the image and the client-side image map, to create a transformed page description, and

sending the transformed page description to the browser.

12. The method of claim 11 wherein the page requested from the server by the browser running on a client computer is a web page.

13. The method of claim 12 wherein the server runs on a server computer and a description of the web page is requested by the browser from the server and sent by the server to the browser via the Internet.

14. The method of claim 12 wherein the server runs on the client computer and a description of the web page is requested by the browser from the server and sent by the server to the browser via an inter-process communications medium within the client computer.

15. The method of claim 12 wherein the description of the web page retrieved by the server in response to the request by the browser is a hyper-text markup language document.

16. The method of claim 12 wherein the image is an OpenPix image and wherein an invocation to a browser extension image viewer is included in the description of the web page.

17. The method of claim 12 wherein input events directed to the active region may include mouse-click, mouse-into, and mouse-out-from events, and actions to be performed in response to input events include display of a web page, display of an image, or launching of a software routine.

18. A system for displaying a page that includes an image and an active region correlated with a particular portion of the image, the display of the page modifiable during the display of the page on a display device of a client computer such that the active region within the image remains correlated with the portion of the image, the system comprising:

a browser running on the client computer that displays the page;

a server that receives a request from the browser for a description of the page and that provides a description of the page that contains an invocation of a viewer, the invocation including parameters that specify an image included in the page and an active region within the image; and

data structures on the client computer that store image-relative indications of the particular portion of the image associated with the active region and actions and actions to be performed in response to input events directed to the active region.

19. The method of claim 19 wherein the page displayed by the browser running on a client computer is a web page.

20. The method of claim 19 wherein the server runs on a server computer and a description of the web page is requested by the browser from the server and received by the browser from the server via the Internet.

21. The method of claim 19 wherein the server runs on the client computer and a description of the web page is requested by the browser from the server and received by the browser from the server via an inter-process communications medium within the client computer.

22. The method of claim 19 wherein the description of the web page received from the server in response to the request by the browser is a hyper-text markup language document.

23. The method of claim 19 wherein input events directed to the active region may include mouse-click, mouse-into, and mouse-out-from events, and actions to be performed in response to input events include display of a web page, display of an image, or launching of a software routine.

24. The method of claim 19 where image-relative coordinates represent the position of points within the image, a point within the image represented by a pair of coordinates, a first coordinate of the pair having a fractional value representing the ratio of a horizontal line segment with a first endpoint coincident with a vertical edge of the image and a second endpoint coincident with the point, the horizontal line segment perpendicular to the vertical edge of the image, the second coordinate of the pair having a fractional value representing the ratio of a vertical line segment with a first endpoint coincident with a horizontal edge of the image and a second endpoint coincident with the point, the vertical line segment perpendicular to the horizontal edge of the image, the horizontal and vertical edges of the image intersecting at an origin having coordinates (0, 0).